

Recent Trends in Public Health

MALCOLM H. MERRILL, M.D., *Berkeley*

SUMMARY

Environmental sanitation is experiencing a reawakening with concerted drives at control of water and atmospheric pollution, mosquito and rodent control, and improvement in restaurant sanitation. Communicable disease control efforts are being intensified.

With prolongation of life, chronic diseases are assuming increasing importance as public health problems. Maintenance of standards of hospitals and provision for more adequate hospital facilities are also receiving attention. Mental health and chronic alcoholism are being considered as a public health problem.

With all these new trends emphasizing prevention of disease, increasing teamwork between physicians in private practice and in public health practice is being manifested. Preventive medicine and public health are now a recognized specialty in medicine.

ONE hundred years have passed since the organized public health movement in the United States received its first real impetus. The beginnings of the modern public health department in this country date from the appointment in 1848 of a "sanitary commission" by the Governor of Massachusetts "to prepare and report to the next General Court a plan for a sanitary survey of the state, embracing a statement of such fact and suggestions as they think proper." Lemuel Shattuck, the great public health pioneer, was chairman of the three-man commission. The "Report of the Sanitary Commission" submitted on April 25, 1850, formulated for the first time the basic pattern for the development of public health.¹⁰ This report "Contained an outline of a state system of public health administration so comprehensive that even today it may serve as an ideal for future realization."¹¹ The succeeding half century saw the revolution wrought by the founding of the science of bacteriology and the early experimental work which laid the foundation for the science of public health engineering with its modern methods of water and sewage treatment.⁸ Then followed methods for pasteurization of milk, control of insects and rodents and the development of other phases of environmental sanitation. The vast changes in human health and welfare emerging from this phase of public health endeavor were accomplished for the most part through the application of engineering principles. The result has been phenomenal. From the year 1856 to 1945

typhoid fever decreased 99 per cent, diarrhea and enteritis 97 per cent, and yellow fever and cholera have ceased to exist in the United States.² These achievements were largely due to advances in environmental sanitation. Do these remarkable achievements mean that the main problems relating to environmental sanitation have been solved? Lest the job be considered complete, it is recommended that consideration be given the recent summary by Wolman¹² entitled "Sanitation of Yesterday—But What of Tomorrow."

Referring to water and waste disposal, Wolman states, "In the State of Massachusetts as in the rest of the United States, it is doubtful whether there is a single stream today which has not deteriorated in a major sense in its quality since 1849. There is hardly a city in Massachusetts or one in the rest of the United States, in which the conditions of housing are not essentially worse than those at which the Shattuck report directed severe criticism. There is not a city in Massachusetts or one in the rest of the United States . . . in which the conditions of the atmosphere are not immeasurably worse today than they were when Mr. Shattuck leveled his attack on this phase of the environment."

Consider the pollution of rivers, harbors, and beaches of California, the substandard housing in both metropolitan and agricultural areas, and the atmospheric pollution of large and populous areas of the state to see the application of Wolman's statement. Add to this the potential hazards of mass application of insecticides, fungicides and pesticides to the fields, orchards and storehouses throughout the state, and another environmental sanitation problem appears.

In California, particularly, the environmental sanitation problems are further complicated by the vast migration of farm laborers and of vacationists and tourists which characterizes life in California, and also by the rapid industrialization of the state with the consequent industrial environmental sanitation problems.

During the century since the founding of modern sanitation, we have gone far in the elimination of epidemic diseases which are borne in water and milk or by insects. Yet during this time other environmental conditions have gradually developed which are important actual or potential hazards to health.

It is only in recent years that we have come to realize the magnitude of these latter sanitation problems and have begun doing something about them. This is one of the recent trends in public health in California. The State Board of Public Health three years ago determined that the dumping of raw sewage into the waters of the state must cease. A

Chairman's address, read before the Section on Public Health, at the 78th Annual Session of the California Medical Association, May 8-11, 1949, Los Angeles.

resolution of the board called for review of all outstanding permits for sewage disposal and directed that no new permits would be issued to communities unless the sewage were properly treated.⁷ Santa Monica Beach was quarantined and court action instituted against the City of Los Angeles. The result has been the development of an extensive sewage disposal project. Cities in increasing number are taking steps to solve their sewage disposal problems. Most of some \$75 million appropriated by the State Legislature for construction of local facilities has been used for modernization of sewage disposal systems. This trend has been reinforced by Congressional enactment of a Federal Stream Pollution Control law. This will serve to stimulate a nationwide attack on stream pollution. The California State Legislature has also taken cognizance of the atmospheric pollution problem and provided a legal pattern for the establishment of air pollution control districts. Such a district is now in operation in Los Angeles County. Concurrently the State Department of Public Health is tightening up on municipal garbage and refuse disposal. The state and local health departments are re-emphasizing enforcement of restaurant sanitation in which they are aided by the recently enacted Restaurant Sanitation Act.¹ Other fields of environmental sanitation such as intensification of mosquito and rodent control are also under way. While these activities may be said to have as a primary purpose the prevention of communicable diseases, the implications are much broader. A clean, wholesome atmosphere; clean, wholesome lakes, beaches, streams, and recreation areas; light, well-ventilated, clean houses; and rodent- and insect-free communities all contribute to health in a positive way beyond the prevention of communicable disease.

Truly, this intensified attack on problems in the field of environmental sanitation is one of the most significant recent trends in public health.

COMMUNICABLE DISEASE CONTROL

The developments through the past century have involved primarily health departments in their association with sanitary and construction engineers coupled with extensive public construction projects. Physicians were not directly involved. They were indirectly involved, however, in that their medical practice changed with the decline in the incidence of the various water-, food- and insect-borne communicable disease.

In contrast to this, however, is the role played by the practicing physician in the phase of public health progress next to be discussed. Almost at once after the identification of bacteria as causative agents of disease it became evident that all communicable diseases were not amenable to control through environmental sanitation measures. In some instances, such as smallpox and diphtheria, specific immunization techniques were early developed. Others have followed. Immediately the practicing physician and the health department became partners in the planning and execution of mass immuni-

zation projects. For many years such projects were spotty and sporadic. As health departments developed into efficiently operating organizations, such programs took on form and substance. The physician gained confidence in the health department, and cooperation in such projects became an accepted practice. It is now recognized that the prevention of smallpox, diphtheria and pertussis is dependent upon the immunization of the individual. Much of this is done ordinarily by the physician as part of his regular practice. Yet there must be careful organization, planning and education of the public by the health department if the larger percentage of the community is to be immunized. As state and local health departments are becoming staffed with professionally trained and qualified personnel this partnership between health departments and physicians in immunization programs is assuming a new significance.

Certain communicable diseases are not primarily amenable to either improved sanitation or immunization. Tuberculosis is such a disease. Efforts to control this disease bring even one step closer the working relationship between the health department and the practicing physician. Perhaps one of the most significant and far-reaching single recent trends in public health is the plan to secure chest x-ray films of some four million California adults. This is to be an all-out attempt to locate and bring under control the bulk of the remaining infectious cases of tuberculosis in the state. This has been planned and is to be executed not only by the health department and the practicing physician, but by the entire community. In these mass surveys, physicians and health officers will not only accelerate the control of tuberculosis but in addition will have an opportunity to experiment jointly in community-wide organization and operation of a health project. This trend toward community-wide participation in public health projects under the leadership of physicians and the health department may have far-reaching significance. It may well provide experience from which varied future community-wide health projects may develop.

CHRONIC DISEASE CONTROL

All the previously mentioned developments of the past century have resulted in a changing age distribution of our population. This has necessitated a shift in public health emphasis. Diminishing neonatal and infant death rates, practical elimination of a number of major communicable diseases, pronounced reduction of maternal death rates, and, more recently, the amazing saving of life being wrought by specific chemotherapy and antibiotic therapy, have all contributed to the prolongation of life. The average age of the populace is increasing. As acute infectious diseases decrease, chronic diseases such as cancer, diabetes, heart disease and arthritis assume an ever-increasing importance in the total public health picture. In the recent study by the chronic disease service of the California State Department of Public Health, it

was shown that from 1910 to 1940 the death rate from a selected group of chronic diseases increased from 555 to 762 per 100,000. At the same time the death rates from a selected group of communicable diseases decreased from 413 to 126.⁵

This changing age distribution of the population with the increasing importance of chronic diseases as the major cause of morbidity and mortality (and consequently as public health problems) is another significant recent trend in public health. As this field of activity develops, health departments and practicing physicians will be brought into even closer working relationships than ever before. Careful study and experimentation will be required to delineate the areas of responsibility of each. A beginning has been made in California through the chronic disease study authorized by the Legislature two years ago and recently completed by the State Department of Public Health. The report⁵ was the result of the joint efforts of the State Department of Public Health, the California Medical Association, and other professional and lay organizations. In it the main elements of the chronic disease problem together with approaches to a solution were presented. Still another recent development is the pilot study of a technique for finding and placing under medical care persons with some of the chronic diseases. This was carried out recently in San Jose under the auspices of the Santa Clara County Medical Society. (A report of this multiphasic survey was published in the December 1949 issue of CALIFORNIA MEDICINE.) Here is a further example of a type of health department-medical association cooperative endeavor that promises much for the future.

HEALTH DEPARTMENTS AND HOSPITALS

Still another recent trend worthy of mention pertains to responsibilities recently given to health departments in the hospital field. In an effort to insure reasonably safe and effective hospital facilities, a system of inspection and licensing of hospitals by the State Department of Public Health has been established. Furthermore, for the first time considered attention is being given to quantitative needs and geographic location of hospitals. Under recent federal and state legislation, a statewide survey has been made of present hospital and health center facilities.⁶ Additional needs in the various categories of hospital beds and of health centers have been defined. Public funds, both federal and state, have been made available to assist in the construction of needed facilities. Up to this time funds have been allotted to assist in the construction of some 23 hospitals in rural areas of the state. In the planning of these programs, physicians, hospital administrators, representatives of the public being served, and the health departments are brought together. Here is another example of how cooperative planning and action are beginning to meet an urgent public health need.

MENTAL HEALTH

The prevention of mental illness is a vast new territory awaiting the plow. Modern public health is beginning to appreciate its responsibility in this large field of human illness. The attack in this field simulates in many ways the administrative procedures required in the field of the other chronic diseases. Here is an individual problem with each patient requiring an individual approach. Some progress has already been made in the development of techniques for attacking this problem. The objective is to prevent mental illness. It is now recognized that through proper training of parents and others dealing with children in their formative years, much can be done to prevent the development of abnormal personality traits. Failing prevention, the next objective is to find mental illness in the incipient stages when corrective measures may be most effectively applied. Only a bare beginning has been made in the development of the public health program in this field. Congress has enacted legislation authorizing the establishment of a National Institute of Mental Health for research and demonstration. Federal appropriations have also been made that provide grants-in-aid to states to develop this public health program.³ Here is presented a unique opportunity for physicians and health departments to jointly develop an urgently needed area of public health.

CHRONIC ALCOHOLISM

Yet another trend is in the direction of recognizing chronic alcoholism as a disease and approaching the condition as primarily a medical problem. The California Medical Association during the past year has shown its concern and has appointed a committee to study this problem and prepare a report for the Association.* Already the concept of a medical approach to this problem is gaining support throughout the state. Several local governments of the state are currently giving serious consideration to substantial appropriations for the provision of medical facilities to attack this problem.

DEVELOPMENT OF LOCAL HEALTH SERVICES

All the trends mentioned thus far pertain to specific health problems. One of the most significant recent trends, however, is in the field of public health administration. The California Local Public Health Assistance Act, which was passed by the 1947 California Legislature, provided a state subsidy for local health work designed to strengthen and extend local health departments in the state. The act also created a Conference of Local Health Officers. It provides that this conference must approve any regulations pertaining to the administration of the subsidy prior to adoption by the State Board of Public Health. This unique organization is already coming to play a dominant role in directing the currents of the new trends in public health in California. It represents a new departure in public health administration wherein the local

* See Page 40, this issue.

health officer becomes a full-fledged partner in planning the statewide public health program.⁴ This action represents a long step forward in cooperative planning for public health administration. It is noteworthy that the California Medical Association played a significant role in the formulation of this legislation.

HEALTH DEPARTMENT-MEDICAL ASSOCIATION COOPERATION

For several years the director of the State Department of Public Health has been meeting regularly with the Council of the California Medical Association at the invitation of the Council. Many of the new trends in public health already discussed have been considered in these joint meetings. A significant expansion of this general procedure is now under consideration involving the appointment of a joint study committee composed of representatives of the Council of the California Medical Association and the Conference of Local Health Officers. All problems pertaining to public health that come before the Council would be referred to this joint committee for study and referral back to the Council with recommendations.

Furthermore, in some counties local health officers have been participating in the meetings of executive committees or councils of local medical associations on a basis comparable to the relationship established by the director of the State Health Department and the Council of the C.M.A.

All of these new trends facilitate mutual trust and understanding between health departments and the medical associations, with resulting benefit to the people of California whom we as physicians all serve.

THE PROFESSIONALIZATION OF PUBLIC HEALTH

There is one additional trend in public health which is most significant. This is the trend toward professionalization of the numerous special disciplines in public health. Since the era when appointments to public health positions were dictated by political expediency, tremendous strides have been made toward requiring specialized training for eligibility to public health positions. Competitive examinations are more and more being utilized as the basis for selections. Shepard⁹ recently reviewed this trend in public health and pointed out the part the American Public Health Association has played

in the development of personnel standards in the various specialties in public health.

A recent development in this field which is particularly significant to all physicians is the creation by the American Medical Association of the American Board of Preventive Medicine and Public Health. By this act the A.M.A. has given formal recognition to preventive medicine and public health as a specialty in the medical field. This can only add to the stature and importance of the public health section of the California Medical Association. At the same time, it should further facilitate the development of even closer working relationships between official health departments and the state and county medical associations in California. It is the culmination of a trend long since inaugurated which is designed to utilize even more fully the talents of our profession in planning public health programs and in helping to solve the perplexing public health problems faced by the people of California.

3093 Life Science Building, University of California.

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